DOCUMENT RESUME

ED 463 042 PS 030 108

AUTHOR Bastick, Tony

TITLE Mediation of Anti-Social Adolescent Behavior by Single-Sex and Co-Educational Schooling.

PUB DATE 2000-04-00

NOTE 13p.; Revision of paper presented at the Western Psychological Association (WPA) Convention (80th, Portland, OR, April 13-16, 2000).

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Adolescents; *Antisocial Behavior; Behavior Problems; *Coeducation; Foreign Countries; Obscenity; Secondary Education; *Secondary School Students; *Sex Differences; Sexual Harassment; *Single Sex Schools; Social Problems; Stealing; Student Attitudes; Vandalism; Violence

IDENTIFIERS Jamaica

ABSTRACT

Many societies institute coeducational and single-sex schools to mediate adolescents' antisocial behavior. This paper details a study comparing antisocial behavior of adolescent boys and girls in coeducational schools with that of a matching group in single-sex schools in Jamaica. The study identified the 10 most common types of antisocial adolescent behavior in Jamaican secondary schools by means of individual interviews with a random sample of 112 students representing the 6 different types of secondary schools in Jamaica. These data were triangulated through interviews with principals and teachers. The prevalence of these behaviors was then determined by surveying a random sample of 1,193 adolescents from 16 representative coeducational and single-sex schools. Analysis showed that adolescent males exhibit significantly more antisocial behaviors than do adolescent females. These gender differences were less significant for verbally based antisocial behavior. Findings indicated that boys in coeducational schools were less antisocial than boys in single-sex schools, a surprising finding because students at single-sex schools generally came from the highest socioeconomic status. Adolescent girls in single-sex schools tended to be less antisocial. The paper's 4 tables list the survey results in terms of mean differences between the genders and school groups on 28 behaviors including minutes it took for teachers to settle class; respect for principal, teacher, prefects and classmates; and the prevalence for both self and friends for stealing, breaking school rules, fighting, absconding, disrespect for teachers, verbal abuse, bad language, wounding, vandalizing, fondling and clothing faults. The social problems of using coeducational schools to mediate antisocial violence among adolescent boys are also discussed. (Contains 28 references.) (JPB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 463 042

Mediation of Anti-Social Adolescent Behavior by Single-Sex and Co-Educational Schooling.

Tony Bastick

April 2000

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
Tony Bastick
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

PS 030108

BEST COPY AVAILABLE

PS

MEDIATION OF ANTI-SOCIAL ADOLESCENT BEHAVIOR BY SINGLE-SEX AND CO-EDUCATIONAL SCHOOLING.

Tony Bastick
The University of the West Indies

Abstract

Violence, and other anti-social behavior, seem to be growing problems in many school systems. It is well documented that the adolescent age group contributes significantly to these problems. Yet a positive aspect of this is that, because adolescents are of school age, the way secondary schools are structured may help to reduce these social problems. One common way of structuring secondary schools in societies that experience these problems is by instituting co-educational and single-sex schools. The mediating effects of these schools on differential academic attainments of males and females is also well documented. This study documents the mediating effects of these schools on the differential anti-social adolescent behavior of males and females.

The ten most common types of anti-social adolescent behavior in Jamaican secondary schools were identified using individual interviews with a random sample of students (n=112) representing the six different types of secondary schools in Jamaica. These data were triangulated through interviews with principals and teachers. The prevalence of these behaviors was then determined by surveying a random sample of adolescents (n=1193) from 16 representative co-educational and single-sex schools. Analysis showed, as found in other countries, that adolescent males exhibit significantly more anti-social behaviors than do adolescent females. The gender differences were less significant for verbally based anti-social behavior.

This paper reports the anti-social behavior of adolescent boys in co-educational schools compared with that of the matching group in single-sex boys schools, and the anti-social behavior of adolescent girls in co-educational schools compared with the matching group in single-sex girls schools. The results, even controlling for differences in Social Economic Status (SES), were quite unexpected. The gendered advantages and disadvantages, and the relevance of the results to the reduction societal violence are also discussed.

PS 030108

Bastick, T. (2000, April). *Mediation of anti-social adolescent behavior by single-sex and co-educational schooling.* Revision of a paper presented at the Western Psychological Association, WPA 2000 Convention, Portland, OR. USA.

Introduction

The World Health Organization's 1994 Inter-American conference on Society, Violence and Health reported that violence is one of the most serious threats to the consolidation of democratic societies in the region of the Americas. However, there is a recognised trend towards increasing violence and anti-social behaviour in the Americas, particularly by the adolescent sections within these societies (Barrett, 1993; Hawkins, 1996; Mesinger , 1984; Walker, 1993). In Jamaica, for example, Headley (1994) reported that in 1987/88 there were 500% more rapes in Jamaica than in 1968/69. The increasing numbers of adolescent Jamaican males implicated in serious crimes indicates a major area of concern for the school system. Reports from the Jamaican Criminal investigation Department showed that in 1990/93, 34% of the 1283 arrests for murder were of adolescents and in the same period 41% of the 2170 arrests for shooting were of adolescents. In just one Jamaican school, in the capital Kingston, Shaw (1995) found that 39% of students had witnessed killings by police, 75% had witnessed stabbings in the community, 59% had witnessed gun shooting crimes, etc. Students took to school, in order of frequency, knives, ice picks, razor blades and scissors "the intent is to inflict injury" (p39-40). The students considered that "robbery is an acceptable 'hustle'".

These findings are comparable with results in the USA. Mikow (1994) surveyed schools in North Carolina and reported that 27 percent of all 9th-12th grade students reported carrying a weapon (gun, knife, club) within a month prior to her survey. Also Ten percent (approximately 30,000) of all high school students reported being threatened or injured by a weapon on school property during the previous school year. In a survey of 3,735 students in 6 public high schools in Ohio and Cleveland, Singer (1994) found that about half of Cleveland central city students and about half the male respondents in central city Denver reported witnessing a shooting.

Guiding theories, such as social development models (Ayers & Shavel, 1997) and general deviance models (Cooper, 1996) have been developed to explain the possible causes of anti-social adolescent behaviour. Much research has also been conducted into the factors that may influence anti-social adolescent behaviour. The interaction of family functioning and negative peer pressure seems to be a major influencing factor across these studies (Brown, 1993; Mason, 1996; Silbereisen, 1990). Although general deviance models posit common high-order factors, such as 'sensation-seeking', it seems that cross-cultural comparisons might indicate that this Family/Peer interaction, and its differential gender effects, might be a culturally determined characteristic. For example, it seems to be an expression of the culture of the subjects whether a particular variety of anti-social adolescent behaviour results from males externalizing or females internalizing their problems (Brack, 1994), or from gender differences in sexual activity and media influence (Ensminger, 1990; Jakobsen, Rise, Aas, & Anderssen, 1997; Johnson, 1995), or from differential gender reactions to impaired parental relationships (Saner & Ellickson, 1996), etc. Hence, some researchers are now using ethnic and social culture-based models of violence prevention (Barrett, 1993; Ward, 1995).

Many programmes have been put in place to help reduce the problems of anti-social adolescent behaviour. Some examples are, therapeutic and gateway programs (Szapocznik, 1990; Davis, 1994), Multisystemic Therapy (MST) and the Positive Adolescents Choices Training (PACT) programs (Hammond, 1990). Some models specifically promote culturally relevant values to reduce anti-social adolescent behaviour. For example, Ward (1995) utilises the care and connectedness implicit in African American racial identity and community culture to reconnect adolescents to communal values and traditions of identity and solidarity. Bouas (1993), uses three elements of morality

(discipline, group attachment and autonomy) in an atmosphere of participatory democracy, respect, reflective thinking, cooperative learning, and parental support. The practitioner can consult helpful surveys and evaluations of these programmes in the literature. For example, a survey of 51 such violence prevention programs has been given by Cohen and Wilson-Brewer (1991). Also, Newkumet and Casserly (1994) describe intervention programs for 36 urban school districts, and methods of evaluating such programmes are given by Linquanti and Berliner (1994).

This current study particularly looks at the problem of anti-social adolescent behaviour in Jamaican schools.

Method

There are six main types of secondary schools in Jamaica (Miller, 1990 p. 165). Adolescent students from each type of school, both co-educational and single-sex schools, were invited, or selected by their teachers, to take part in individual interviews of 15 minutes duration where they were asked to identify the most common types of anti-social behaviour in their schools. The 112 adolescents in these interviews identified mainly the following thirteen behaviours: Absconds classes, Steals, Disrespects teachers, Verbally abuses others, Wears clothing not allowed by the school rules, *Pushes and shoves when in a line*, Fights, Carries a weapon to inflict wounds, Vandalizes furniture and buildings, Fondles ('has sex play with other students'), *Rapes, Traffics or abuses drugs*. The frequency of the behaviours was noted and checked with teachers and/or the Principals of the schools. From this process the behaviours in italics above were seen as less frequent and the behaviour of Disrespect was expanded to include Disrespect to Principals, Prefects and peers as well as towards teachers. The resulting behaviours of interest are shown in the following Tables 1 through 3.

1193 adolescents from 16 representative schools were then surveyed to discover (i) the prevalence of these behaviours among their friends, on a scale from 0 (meaning not at all) to 9 (meaning very much); and (ii) the number of times each adolescent had partaken in the behaviour that week. These behaviours could have occurred in or out of school, as no stipulation was made. It is expected that behaviour whose prevalence among friends is reported, might be more extreme, in order to be publicly noticed, than self-reported prevalence which might be of less extreme examples of personal importance. It will be noted from Tables 1 through 3 that some behaviours are reported twice (e.g. respect/disrespect for teachers, prevalence of stealing by friends). Questions about these behaviours were asked twice, in different ways, as reliability checks on the respondents' replies and both sets of results are reported in the tables as reliability evidence. In addition to these questions, the students were also asked the number of minutes that it usually takes their teacher to settle the class in readiness for beginning a single lesson of 30-35 minutes.

Sample

16 schools were sampled to represent the main types of secondary schools in Jamaica. Allowing for some missing responses, of the 1194 students surveyed, 478 were male and 702 were female. Their ages ranged from 12 years to 18 years with an average age of 14.3 years. 521 students were from single sex schools and 672 were attending co-educational schools. 512 were from urban secondary schools and 160 were from rural secondary schools. The others attended semi-urban schools. Their class sizes ranged from 23 to 53 with a mean 40.5 children per class.

Table 1. Differences between adolescent male and female anti-social behaviours in Jamaica

Mean differences between All Boys (n=478) and All Girls (n=709)	Means		% All Boys / All Girls	Difference Favours		Significance	
	All Boys	All Girls		All Boys	All Girls		
Minutes (Teacher Settling Class)	9.4665	9.6766			0.2101		0.566
Respect Principal (0 to 9)	7.7441	8.1766			0.4324	**	0.000
Respect Teacher (0 to 9)	6.7983	7.2722			0.4739	**	0.000
Respect Prefects (0 to 9)	4.4722	4.8045			0.3323	*	0.037
Respect Classmates (0 to 9)	4.1838	4.2433			0.0595		0.693
Stealing prevalence by friends (0 to 9)	2.3341	1.0842			1.2499	**	0.000
Breaking school rules (0 to 9)	1.4694	1.1497			0.3198	*	0.015
Choosing to break school rules (0 to 9)	2.3871	2.4761			0.0890		0.641
Stealing prevalence by friends (0 to 9)	2.2174	1.3382			0.8792	**	0.000
Stealing own prevalence last week	0.6667	0.2838	235%		0.3828	*	0.003
Fighting prevalence by friends (0 to 9)	3.2462	2.5128			0.7333	**	0.000
Fighting own prevalence last week	0.6563	0.3636	181%		0.2926	*	0.013
Absconding prevalence by friends (0 to 9)	2.4376	2.3376			0.1000		0.563
Absconding own prevalence last week	0.6938	0.6386	109%		0.0552		0.686
Disrespect teachers prevalence by friends (0 to 9)	2.9911	2.8569			0.1342		0.450
Disrespect teachers own prevalence last week	0.9690	0.7783	125%		0.1907		0.199
Verbal abuse prevalence by friends (0 to 9)	3.5655	3.7457			0.1802		0.385
Verbal abuse own prevalence last week	1.3474	1.3079	103%		0.0396		0.827
Bad language prevalence by friends (0 to 9)	4.4887	4.4116			0.0772		0.716
Bad language own prevalence last week	1.6369	1.9712	83%	0.3343			0.101
Wounding prevalence by friends (0 to 9)	2.4245	1.6155			0.8089	**	0.000
Wounding own prevalence last week	0.6720	0.6823	98%	0.0103			0.942
Vandalizing prevalence by friends (0 to 9)	3.3132	2.9369			0.3763		0.070
Vandalizing own prevalence last week	1.0194	1.0200	100%	0.0006			0.997
Fondling prevalence by friends (0 to 9)	3.2603	2.4965			0.7638	**	0.001
Fondling own prevalence last week	1.1600	0.6347	183%		0.5253	**	0.003
Clothing faults prevalence by friends (0 to 9)	3.0023	2.8032			0.1991		0.317
Clothing faults own prevalence last week	1.0728	1.0916	98%	0.0188			0.913

Table 2: Differences between anti-social behaviours of adolescent females attending single-sex schools and co-educational schools in Jamaica

Mean differences between SSG and CEG Single Sex Girls (n=319) and Co-Ed Girls (n=390)	Means		Difference Favours		Significance	
	SSG	CEG	SSG	CEG		
Minutes (Teacher Settling Class)	9.3478	9.8324	0.4845			0.358
Respect Principal (0 to 9)	8.0125	8.3111		0.2985	**	0.006
Respect Teacher (0 to 9)	7.1348	7.3846		0.2498		0.057
Respect Prefects (0 to 9)	4.4290	5.1105		0.6815	**	0.000
Respect Classmates (0 to 9)	4.6164	3.9383	0.6780		**	0.000
Stealing prevalence by friends (0 to 9)	0.8409	1.2788	0.4379		**	0.007
Breaking school rules (0 to 9)	1.6751	0.6817		0.9934	**	0.000
Choosing to break school rules (0 to 9)	2.9200	2.0552		0.8648	**	0.001
Stealing prevalence by friends (0 to 9)	0.8493	1.7225	0.8733		**	0.000
Stealing own prevalence last week	0.2417	0.3373	0.0956			0.437
Fighting prevalence by friends (0 to 9)	2.1126	2.8297	0.7171		**	0.000
Fighting own prevalence last week	0.2264	0.5318	0.3054		*	0.028
Absconding prevalence by friends (0 to 9)	1.5679	2.9735	1.4056		**	0.000
Absconding own prevalence last week	0.4019	0.9053	0.5034		**	0.003
Disrespect teachers prevalence by friends (0 to 9)	2.8239	2.8860	0.062			0.783
Disrespect teachers own prevalence last week	0.7788	0.7778		0.0010		0.996
Verbal abuse prevalence by friends (0 to 9)	3.3414	4.0761	0.7347		**	0.005
Verbal abuse own prevalence last week	1.1667	1.4670	0.3003			0.192
Bad language prevalence by friends (0 to 9)	4.2780	4.5208	0.2428			0.363
Bad language own prevalence last week	1.9167	2.0268	0.1101			0.688
Wounding prevalence by friends (0 to 9)	1.0000	2.1162	1.1162		**	0.000
Wounding own prevalence last week	0.3942	1.0227	0.6285		**	0.001
Vandalizing prevalence by friends (0 to 9)	2.2198	3.5043	1.2846		**	0.000
Vandalizing own prevalence last week	1.0773	0.9503		0.1270		0.564
Fondling prevalence by friends (0 to 9)	0.8902	3.7313	2.841		**	0.000
Fondling own prevalence last week	0.4000	0.8889	0.4889		**	0.010
Clothing faults prevalence by friends (0 to 9)	2.6858	2.9088	0.223		**	0.400
Clothing faults own prevalence last week	1.0679	1.1202	0.0523			0.820

Table 3: Differences between anti-social behaviours of adolescent males attending single-sex schools and co-educational schools in Jamaica

Mean differences between SSB and CEB Single Sex Boys (n=199) and Co-Ed Boys (n=279)	Means		% SSG / CEG	Difference Favours		Significance	
	SSB	CEB		SSB	CEB		
Minutes (Teacher Settling Class)	10.7118	8.6129	124%		2.0989	**	0.000
Respect Principal (0 to 9)	7.1615	8.1480			0.9866	**	0.000
Respect Teacher (0 to 9)	6.1414	7.2545			1.1132	**	0.000
Respect Prefects (0 to 9)	3.5916	5.0794			1.4878	**	0.000
Respect Classmates (0 to 9)	3.8802	4.3949			0.5147	*	0.036
Stealing prevalence by friends (0 to 9)	3.0503	1.8130			1.2373	**	0.000
Breaking school rules (0 to 9)	2.3216	0.8571			1.4645	**	0.000
Choosing to break school rules (0 to 9)	2.8462	2.0556			0.7906	**	0.006
Stealing prevalence by friends (0 to 9)	2.8108	1.7817			1.0291	**	0.000
Stealing own prevalence last week	0.7843	0.5467	143%		0.2376		0.325
Fighting prevalence by friends (0 to 9)	3.9894	2.7180			1.2714	**	0.000
Fighting own prevalence last week	0.9006	0.4088	220%		0.4918	*	0.012
Absconding prevalence by friends (0 to 9)	2.4536	2.4264			0.0272		0.915
Absconding own prevalence last week	0.8400	0.5541	152%		0.2859		0.188
Disrespect teachers prevalence by friends (0 to 9)	3.1905	2.8456			0.3449		0.219
Disrespect teachers own prevalence last week	1.2988	0.6289	207%		0.6698	**	0.004
Verbal abuse prevalence by friends (0 to 9)	4.0222	3.2431			0.7791	*	0.016
Verbal abuse own prevalence last week	1.6061	1.0904	147%		0.5157		0.070
Bad language prevalence by friends (0 to 9)	4.9568	4.1544			0.8023	*	0.018
Bad language own prevalence last week	2.0943	1.2260	171%		0.8684	**	0.003
Wounding prevalence by friends (0 to 9)	2.7111	2.2068			0.5044		0.077
Wounding own prevalence last week	0.4474	0.8827	51%	0.4353		*	0.035
Vandalizing prevalence by friends (0 to 9)	3.4144	3.2400			0.1744		0.598
Vandalizing own prevalence last week	1.1074	0.9379	118%		0.1695		0.486
Fondling prevalence by friends (0 to 9)	1.4123	4.0996		2.6873		**	0.000
Fondling own prevalence last week	0.4717	1.5917	30%	1.12		**	0.000
Clothing faults prevalence by friends (0 to 9)	2.9322	3.0506		0.1184			0.689
Clothing faults own prevalence last week	0.9868	1.1515	86%	0.1648			0.523

Table 4: Significant differences between the anti-social behaviours of adolescent males and females in single-sex and co-educational schools in Jamaica

Significant differences between males and females in single-sex and co-educational schools	Advantage to Males		Advantage to Females	
	Single-sex	Co-Ed	Single-sex	Co-Ed
Minutes (Teacher Settling Class)		**		
Respect Principal (0 to 9)		**		**
Respect Teacher (0 to 9)		**		
Respect Prefects (0 to 9)		**		**
Respect Classmates (0 to 9)		*	**	
Stealing prevalence by friends (0 to 9)		**	**	
Breaking school rules (0 to 9)		**		**
Choosing to break school rules (0 to 9)		**		**
Stealing prevalence by friends (0 to 9)		**	**	
Stealing own prevalence last week				
Fighting prevalence by friends (0 to 9)		**	**	
Fighting own prevalence last week		*	*	
Absconding prevalence by friends (0 to 9)			**	
Absconding own prevalence last week			**	
Disrespect teachers prevalence by friends (0 to 9)				
Disrespect teachers own prevalence last week		**		
Verbal abuse prevalence by friends (0 to 9)		*	**	
Verbal abuse own prevalence last week				
Bad language prevalence by friends (0 to 9)		*		
Bad language own prevalence last week		**		
Wounding prevalence by friends (0 to 9)			**	
Wounding own prevalence last week	*		**	
Vandalizing prevalence by friends (0 to 9)			**	
Vandalizing own prevalence last week				
Fondling prevalence by friends (0 to 9)	**		**	
Fondling own prevalence last week	**		**	
Clothing faults prevalence by friends (0 to 9)			**	
Clothing faults own prevalence last week				
Totals	3	15	14	4

Analyses and results.

All the boys were first compared with all the girls, using independent sample t-tests, to identify the anti-social behaviours by sex. These results are shown in Table 1.

It comes as no surprise to find that many of the anti-social behaviours are associated significantly more with males than with females. It is interesting, however, to see that there were no male/female differences in Absconding, Disrespect to teachers, Verbal abuse and Bad language.

Given this finding, that males engaged in more anti-social behaviours than females, analyses were then done to find the effect of type of schooling. In particular, were the girls in single sexed schools more or less anti-social than the girls in co-educational schools? These results are presented in Table 2. Similarly, were the boys in single-sex schools more or less anti-social than the boys in co-educational schools? These results are presented in Table 3.

It is most interesting and unexpected to see that adolescent boys attending co-educational schools are less anti-social than adolescent boys attending single-sex schools. This is unexpected because children attending the single-sex schools in this sample generally came from the highest Social Economic Status (SES) groups and these schools are considered to be among the most elite schools in Jamaica. One might have expected that high SES adolescents would be less socially disruptive than low SES adolescents. This was not the case. In contrast, many children attending the co-educational schools in the sample came from the lowest Social Economic Status Groups. For example, Table 4 gives the occupation and estimated income of the parents from a class of 50 students in one of these schools. Most of these children came to school hungry. An interesting gendered observation from this 'down town' school was that the free lunch queue contained mainly boys. The girls said that they did not want others to know they could not afford lunch and, rather than signalling this by standing in the lunch line, they would prefer go without lunch.

Table 4 summarises from Tables 2 and 3 the social advantages shown by adolescent boys and girls attending single-sex and co-educational schools in Jamaica.

Conclusions

From Table 1 we could see that there were no significant overall male/female differences in 'Absconding' and verbally based anti-social behaviour.

It will be noticed from Table 4 that significantly less prevalence of 'Fondling' contributes twice to the advantages of single-sex schools, for both males and females. This is probably because heterosexual fondling is more prevalent than same-sex fondling and the opportunity for this more prevalent type of anti-social behaviour is not present in single-sex schools.

Results of comparing boys in single-sex schools with boys in co-educational schools showed, that of the 28 behaviours, there were 15 significant differences that gave social advantages to males in co-educational schools and only 3 significant differences that gave social advantages to males in single sex schools. There was no significant differences between the types of schools for the other 10

behaviours. When the 28 disruptive behaviours of the girls in single-sex schools were compared with those for girls in co-educational schools it was found that single-sex schools gave a significant social advantage to the girls for 14 of the behaviours and co-educational schools gave a significant advantage to the girls on 4 of the behaviours. There were no significant differences in the other 10 behaviours. The 10 behaviours for which there were no significant differences between schools for girls were not the same as the 10 behaviours that had non-significant differences between schools for the boys - the same number, 10, was just a coincidence. These results are summarised in Table 5 which shows the numbers of significantly different socially disruptive behaviours indicating social advantages to males and females in single-sex and co-educational schools.

Table 5: Significant advantages of less anti-social adolescent behaviour by sex and school type

	Single-Sex	Co-Ed
Males	3	15
Females	14	4

If is clearly seen from Table 5 that single-sex schools favour a reduction in disruptive behaviour of females by 14:4, whereas co-educational schools favour a reduction in the disruptive behaviour of males by a ratio of 15:3. So we can conclude that co-educational schools most significantly reduce adolescent male anti-social behaviour and single-sex schools most significantly reduce adolescent female anti-social behaviour. It should be noted that this is a simple count of behaviours. Whereas in practice, each behaviour contributes differently to the total violence in society. Different societies attach differential social advantages to reducing each type of anti-social behaviour, and the violence reduction programmes cited above have shown that these behaviours can be selectively reduced. How much each behaviour should be weighted for its disruptive effect is a social value judgement whose consensus should be considered in future research.

Apart from verbally based anti-social behaviour, Table 1 showed the expected result that Jamaican adolescent males engage in significantly more anti-social behaviour than do Jamaican females. By simply counting these behaviours as equally disruptive, it was found that males contributed 95% to the overall disruption and females only 5% which is a male:female ratio of 19:1.

Hence, given these caveats, these results create an ethical problem for society. Because the level of male violence is far greater than the level of female violence, it is an advantage to society, as a whole, to use the co-educational system to reduce this greater level of male violence. It would reduce male violence and at the same time it would increase the lower level of violence of the female sector of the population. However, these simple results do not measure any interaction between male and female violence and the overall level of violence in society. In considering this interaction, it is plausible that the larger reduction in societal violence that would result from using co-educational systems might, in itself, hold back the lesser increase expected in female violence. This is plausible because, all things being equal, a reduced level of overall societal violence can be expected to have a positive feed-back effect in reducing the violence of all subgroups who comprise the society. Hence, from the results of this research, it is expected that co-educational schooling would reduce socially disruptive and violent behaviour of both adolescent males and adolescent females. However, it has been widely shown that co-educational schooling generally achieves lower academic standards than single-sex schooling. So, Jamaican society may have to choose a middle road between the two ideals of higher academic achievement and a more peaceful society.

References

Ayers, C. & Shavel, D. (1997). Adventure Programming & Prevention of Adolescent Problem Behaviors: Applying Research and the Public Health Model of Prevention. In: Deeply Rooted, Branching Out, 1972-1997. Annual AEE International Conference Proceedings (ERIC Document Reproduction services No. ED 414 125)

Barrett, R. K. (1993). Urban Adolescent Homicidal Violence: An Emerging Public Health Concern. *Urban League Review, 16* (2) 67-75

Bouas, M. J. (1993). The Three R's of Moral Education: Emile Durkheim Revisited. *Educational Forum, 57* (2), 180-85

Brack, C. J. (1994). Dimensions Underlying Problem Behaviors, Emotions and Related Psychosocial Factors in Early and Middle Adolescents. *Journal of Early Adolescence, 14* (3), 345-70.

Brown, B. V. (1993). Family Functioning and Adolescent Behavior Problems: An Analysis of the National Survey of Families and Households. Washington, DC: Child Trends, Inc. (ERIC Document Reproduction services No. ED 415 993)

Cohen, S., & Wilson-Brewer, R. (1991). Violence prevention for young adolescents: The state of the art of program evaluation. Working Papers. Proceedings of the Carnegie Corporation Conference on Violence Prevention for Young Adolescents. Newton, MA: Education Development Center, Inc.

Cooper, M. L. (1996, August). Covariation among Adolescent Problem Behaviors: What Does It Mean? Paper presented at the 104th Annual Meeting of the American Psychological Association, Toronto, Ontario, Canada.

Davis, S. M. (1994). How the Gateway Program Helps Troubled Teens. *Educational Leadership, 52* (1), 17-19.

Ensminger, M. E. (1990). Sexual Activity and Problem Behaviors among Black, Urban Adolescents. *Child Development, 61*(6), 2032-46.

Hammond, W. R. (1990). Positive Adolescents Choices Training (PACT): Preliminary Findings of the Effects of a School-Based Violence Prevention Program for African American Adolescents. Paper presented at the 98th Annual Convention of the American Psychological Association, Boston, MA.

Hawkins, D. F. (1996). Ethnicity, Race, Class, and Adolescent Violence. (Center Paper 006). University of Colorado at Boulder: Center for the Study and Prevention of Violence.

Headley, B. D. (1994). The Jamaican Crime Scene: A perspective. Mandeville, Jamaica: Eureka Press Ltd.

Jakobsen, R., Rise, J., Aas, H., & Anderssen, N. (1997). Noncoital Sexual Interactions and Problem Behaviour among Young Adolescents: The Norwegian Longitudinal Health Behaviour Study. *Journal of Adolescence, 20*(1), 71-83.

Johnson, J. D. (1995). Differential Gender Effects of Exposure to Rap Music on African American Adolescents' Acceptance of Teen Dating Violence. *Sex Roles: A Journal of Research, 33*(7-8), 597-605.

Linquanti, R., & Berliner, B. A. (1994). Rebuilding schools as safe havens: A typology for selecting and integrating violence prevention strategies. Portland, OR: Western Regional Center for Drug-Free Schools and Communities.

Mason, C. A. (1996). Neither Too Sweet nor Too Sour: Problem Peers, Maternal Control, and Problem Behavior in African American Adolescents. *Child Development, 67*(5), 2115-30.

Mesinger, J. F. (1984, October). Megatrends Relating to Adolescent Violence and Correctional Education. Paper presented at the National Adolescent Conference on Behavior Disorders, Pensacola, FL.

Mikow, V. A. (1994). Selected Indicators of Adolescent Violence & Safety at School. North Carolina State Dept. of Public Instruction, Raleigh. Div. of Innovation and Development Services. (ERIC Document Reproduction services No. ED 379 551).

Miller, E. (1990). Jamaican society and high schooling. Kingston, Jamaica: University of the West Indies, Institute of Social and Economic Research.

Newkumet, M. B., & Casserly, M. (1994). Urban school safety: Strategies of the Great City Schools. Washington, DC: Council of the Great City Schools.

Saner, H. & Ellickson, P. (1996). Concurrent Risk Factors for Adolescent Violence. *Journal of Adolescent Health, 19*(2), 94-103.

Shaw, J. E. C. (1995). *The experience of violence and its effect on the views of All Age School students.* Unpublished master's of Public Health thesis, University of the West Indies, Kingston, Jamaica.

Silbereisen, R. K. (1990). Family Income Loss and Economic Hardship: Antecedents of Adolescents' Problem Behavior. *New Directions for Child Development*, 46, 27-47.

Singer, M. I. (1994). The Mental Health Consequences of Adolescents' Exposure to Violence. Final Report. Case Western Reserve University, Cleveland, OH: Center for Practice Innovations.

Szapocznik, J. (1990). Interplay of Advances between Theory, Research, and Application in Treatment Interventions Aimed at Behavior Problem Children and Adolescents. *Journal of Consulting and Clinical Psychology, 58*(6), 696-703.

Walker, H. M. (1993). Anti-Social Behavior in School. *Journal of Emotional and Behavioral Problems*, 2(1), 20-24.

Ward, J. V. (1995). Cultivating a Morality of Care in African American Adolescents: A Culture-Based Model of Violence Prevention. *Harvard Educational Review, 65*(2), 175-88.

World Health Organization, (1994, November). Inter-American Conference on 'Society, Violence and Health'. ■

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title	Mediation of anti-social adolescent behavior by single-sex and co-educational schooling.
Author(s):	Bastick, Tony
Corporate Source: Revision of a paper presented at the Western Psychological Association, WPA 2000 Convention, Portland, OR. USA.	Publication Date: 2000, April

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

1

Level 1

☑

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature	Printed Name/Position/Title: Tony Bastick, Research Coordinator, Dr.	
Organization/Address: University of the West Indies, Department of Educational Studies, Mona Campus, Kingston 7, Jamaica	Telephone: (876)927-2130	FAX: (876)977-0482
	E-Mail Address: tbastick@uwimona.edu.jm	Date: 5th Dec 2001

(over)

PS 030108

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com